

Remarks

Claims 3, 4, 5, 6, 11, 12, 13, 14, 15, 16, 17, 18, 19, 21, 22, and 23 have been amended to eliminate multiple dependency and thereby minimize claim fees.

Respectfully submitted,

By:



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3. Polymers according to claim 1 (claims 1 or 2), wherein the complexing agent different from the polymer forming the polymeric matrix is selected from the group consisting of polylactic acid, polyglycolic acid, poly(lactic-glycolic) acid copolymers, ethylene-arylic acid copolymers, ethylene-vinylacetate copolymers.
5. 4. Polymers according to claim 1 [any of claims 1 to 3], in which the quantity of filler comprising the complex dispersed in the hydrophobic polymer is from 0.5 to 50% by weight.
6. 5. Polymers according to claim 1 [any of claims 1 to 4], in which the starch complexes are produced from compositions of starch with polymers compatible with starch containing lyophilic groups and lyophobic sequences, wherein the starch complex is present and from which a micro-dispersion of particles with numeral average diameters of less than 1 micron is formed by treatment in water at 100°C under stirring.
7. 6. Polymers according to claim 1 [claims 1 to 5], produced with the use of compositions having a water content of less than 20%, and higher than 2% by weight, and a Tg below 0°C.
8. 7. Polymers according to claim 1 [claims 1 or 2], wherein the starch complexing agent is a fatty acid or a derivative thereof.
9. 8. Polymers according to claim 1 [claims 1 or 2], wherein the starch complexing agent contains reactive groups for the hydrophobic matrix.
10. 9. Polymers according to claim 1 [any of claim 1 to 12], in which the hydrophobic polymer incompatible with starch is selected from the group consisting of ethylene polymers and copolymers, crystalline propylene polymers and copolymers, aromatic polyester resins, polyamides, polyoxymethylene resins, polyphenylene oxide resins, and polycarbonates.

- 13 14. Polymers according to claim 1 [any of claims 1 to 12], in which the hydrophobic polymer is a rubber selected from the group consisting of styrene-butadiene rubbers, polybutadiene rubbers, polyisoprene rubbers, ethylene-propylene and ethylene-propylene-diene rubbers, and natural rubber.
- 14 15. A method for preparing filled polymers according to claim 1 [any of claims 1 to 14], in which a composition comprising the starch/polymer complex, forming part of a continuous interpenetrated structure between the complexing polymer and the complex is mixed, in the melt state or under hot mastication conditions, with the hydrophobic polymer incompatible with starch, in the presence of coupling agents containing groups reactive with the polymer matrix and with the complex.
- 15 16. A method preparing filled polymers according to claim 1 [any of claims 1 to 14], in which a composition comprising the starch/polymer complex is mixed with a rubber at a processing temperature between 140 and 160°C, in the presence of coupling agents containing groups reactive with the polymer matrix and with the complex.
- 16 17. A method according to claim 15 [claims 15 and 16], in which the coupling agent is selected from vinyl and tetrasulphide silanes and alkyl titanates.
- 17 18. A method according to claim 15 [any of claims 15, 16 and 17] in which the coupling agent is used in a quantity of from 0.5 to 10% by weight of the complex.
- 18 19. A method for preparing filled polymers according to claim 1 [claims 1 to 14], wherein the polymeric matrix is a biodegradable polymer selected from the group consisting of the aliphatic aromatic polyesters, the aliphatic polyamides, the polyamides-polyesters,

polyurethane-polyesters, polyurethane-polyamides and polyurea-polyesters comprising melt-mixing the polymer forming the polymeric matrix with a complex of starch having the characteristics as set forth in claim 1 and further characterised by being formed of starch complexed with a complexing agent different from the polymer forming the matrix and from the ethylene-vinylalcohol copolymers. *[or with other complexing agents]*

- 20 21. Shaped articles obtainable from the hydrophobic polymers of claim 1 [claims 1 to 14].
- 21 22. Shaped articles obtainable from the hydrophobic polymers of claim 1 [claims 1 to 14], wherein the hydrophobic polymer is selected from the group consisting of the aliphatic and aliphatic-aromatic polyesters, polyurethane-polyamides, polyurea-polyesters, and polyurethane-polyesters.
- 22 23. Films and compostable bags obtainable from the hydrophobic polymers of claim 1 [claims 1 to 14].

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